Letter to the Editor

A note on the paper "Outcrossing rates of marked Poisson cluster processes in structural reliability"

An article by K. Schrupp and R. Rackwitz appeared in *Applied Mathematical Modelling*, Volume 12, October 1988.[1] Since the authors of this article make reference to some of the work of the writer incorrectly, some comments are in order.

The main part of the paper is based on a Ph.D. thesis of the first author.[2] In this thesis the Poisson convergence of the failure rate was proven by a general theorem.

In their present paper, however, the authors do not use this theorem to prove the convergence of the point process of crossings. Instead, they refer to a report of the writer.[3] They claim that the proof of the formulas (35) and (36) in their paper is given in Ref. 3. The writer, in Ref. 3, proved such relations for the sum of Poisson square wave processes, i.e., not for the case under consideration here. Furthermore, the writer is also unable to understand the derivation of the equations (42) and (43) in the Schrupp and Rackwitz paper. Perhaps there is an error and the equation $B(F,0) \approx \varphi(-\beta_1)$ is not correct and should be replaced by $B(F,0) \approx \Phi(-\beta_1)$ (i.e., standard normal integral instead of standard normal density). Ref. 3 does not derive these results.

Therefore, the writer would like to state clearly that the results in the paper by Schrupp and Rackwitz, which are attributed to him, are not his work, that he was not informed or consulted in any way by the authors doing the preparation of the paper and that he is not responsible for any of the conclusions derived in the paper.

References

1 Schrupp, K. and Rackwitz, R. Outcrossing rates of marked Poisson cluster processes in structural reliability. *Appl. Math. Modelling* 1988, **12**(5), 482–490

2 Schrupp, K. Austrittsraten von markierten Poissonschen Clusterprozessen und ihre Anwendung in der Zuverlaessigkeitstheorie. *Berichte zur Zuverlässigkeitstheorie der Bauwerke*, 77, Technische Universität München, München, 1986

3 Breitung, K. Asymptotic approximations for the maximum of the sum of Poisson square wave processes. *Berichte zur Zuverlässigkeitstheorie der Bauwerke*, 69, Technische Universität München, München, 1984

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